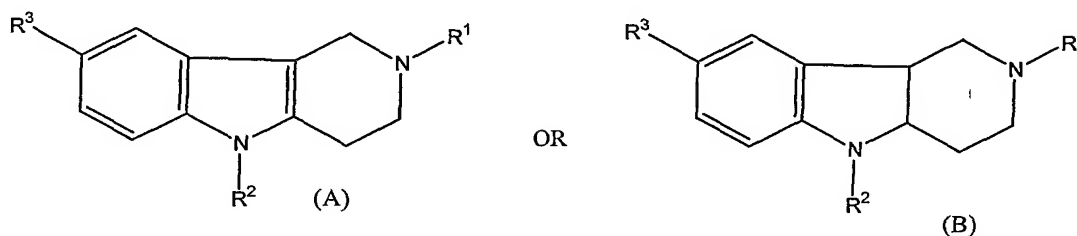


## CLAIMS

1. A method of slowing aging in a mammal, the method comprising administering to a mammal an amount of a hydrogenated pyrido (4,3-b) indole or pharmaceutically acceptable salt thereof effective to slow aging.
2. The method of claim 1, wherein the hydrogenated pyrido (4,3-b) indole is a tetrahydro pyrido (4,3-b) indole.
3. The method of claim 1, wherein the hydrogenated pyrido (4,3-b) indole is a hexahydro pyrido (4,3-b) indole.
4. The method of claim 1, wherein the hydrogenated pyrido (4,3-b) indole is of the formula:



wherein:

$R^1$  is selected from a lower alkyl or aralkyl

$R^2$  is selected from a hydrogen, aralkyl or substituted heteroaralkyl

$R^3$  is selected from hydrogen, lower alkyl or halo.

5. The method of claim 2, wherein aralkyl is  $\text{PhCH}_2$ - and substituted heteroaralkyl is 6- $\text{CH}_3$ -3-Py- $(\text{CH}_2)_2$ -.
6. The method of claim 2, wherein
  - $R^1$  is selected from  $\text{CH}_3$ -,  $\text{CH}_3\text{CH}_2$ -, or  $\text{PhCH}_2$ -
  - $R^2$  is selected from H-,  $\text{PhCH}_2$ -, or 6- $\text{CH}_3$ -3-Py- $(\text{CH}_2)_2$ -
  - $R^3$  is selected from H-,  $\text{CH}_3$ - or Br-.

7. The method of claim 1, wherein the hydrogenated pyrido (4,3-b) indole is selected from the group consisting of:

- cis( $\pm$ ) 2,8-dimethyl-2,3,4,4a,5,9b-hexahydro-1H-pyrido[4,3-b]indole;
- 2-ethyl-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole;
- 2-benzyl-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole;
- 2,8-dimethyl-5-benzyl-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole;
- 2-methyl-5-(2-methyl-3-pyridyl)ethyl-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole;
- 2,8-dimethyl-5-(2-(6-methyl-3-pyridyl)ethyl)-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole;
- 2-methyl-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole;
- 2,8-dimethyl-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole;
- 2-methyl-8-bromo-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole.

8. The method of claim 7, wherein the hydrogenated pyrido (4,3-b) indole is 2,8-dimethyl-5-(2-(6-methyl-3-pyridyl)ethyl)-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole.

9. The method of claim 1 or 8, wherein the pharmaceutically acceptable salt is a pharmaceutically acceptable acid salt.

10. The method of claim 9, wherein the pharmaceutically acceptable salt is a hydrochloride acid salt.

11. The method of claim 1, wherein the hydrogenated pyrido (4,3-b) indole is 2,8-dimethyl-5-(2-(6-methyl-3-pyridyl)ethyl)-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole dihydrochloride.

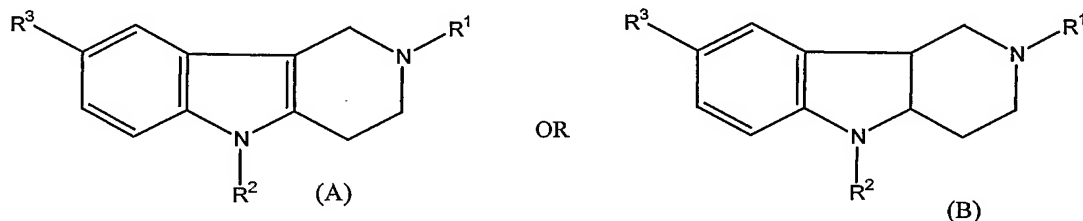
12. The method of claim 6, wherein  $R^1$  is  $CH_3-$ ,  $R^2$  is H and  $R^3$  is  $CH_3-$ .

13. The method of claim 6, wherein  $R^1$  is  $CH_3CH_2-$  or  $PhCH_2-$ ,  $R^2$  is H-, and  $R^3$  is  $CH_3-$ .

14. The method of claim 6, wherein  $R^1$  is  $CH_3-$ ,  $R^2$  is  $PhCH_2-$ , and  $R^3$  is  $CH_3-$ .

15. The method of claim 6, wherein  $R^1$  is  $CH_3-$ ,  $R^2$  is 6- $CH_3$ -3-Py- $(CH_2)_2-$ , and  $R^3$  is H-.

16. The method of claim 6, where  $R^2$  is 6-CH<sub>3</sub>-3-Py-(CH<sub>2</sub>)<sub>2</sub>-.
17. The method of claim 6, wherein  $R^1$  is CH<sub>3</sub>-,  $R^2$  is H-, and  $R^3$  is H- or CH<sub>3</sub>-.
18. The method of claim 6, where  $R^1$  is CH<sub>3</sub>-,  $R^2$  is H-, and  $R^3$  is Br-.
19. A method of slowing the progression of age associated hair loss in a mammal, the method comprising administering to a mammal an amount of a hydrogenated pyrido (4,3-b) indole or pharmaceutically acceptable salt thereof effective to slow the progression of age associated hair loss.
20. The method of claim 19, wherein the hydrogenated pyrido (4,3-b) indole is a tetrahydro pyrido (4,3-b) indole.
21. The method of claim 19, wherein the hydrogenated pyrido (4,3-b) indole is a hexahydro pyrido (4,3-b) indole.
22. The method of claim 17, wherein the hydrogenated pyrido (4,3-b) indole is of the formula:



wherein:

$R^1$  is selected from a lower alkyl or aralkyl

$R^2$  is selected from a hydrogen, aralkyl or substituted heteroaralkyl

$R^3$  is selected from hydrogen, lower alkyl or halo.

23. The method of claim 22, wherein aralkyl is PhCH<sub>2</sub>- and substituted heteroaralkyl is 6-CH<sub>3</sub>-3-Py-(CH<sub>2</sub>)<sub>2</sub>-.
24. The method of claim 22, wherein

R<sup>1</sup> is selected from CH<sub>3</sub>-, CH<sub>3</sub>CH<sub>2</sub>-, or PhCH<sub>2</sub>-

R<sup>2</sup> is selected from H-, PhCH<sub>2</sub>-, or 6-CH<sub>3</sub>-3-Py-(CH<sub>2</sub>)<sub>2</sub>-

R<sup>3</sup> is selected from H-, CH<sub>3</sub>- or Br-.

25. The method of claim 19, wherein the hydrogenated pyrido (4,3-b) indole is selected from the group consisting of:

cis(±) 2,8-dimethyl-2,3,4,4a,5,9b-hexahydro-1H-pyrido[4,3-b]indole;

2-ethyl-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole;

2-benzyl-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole;

2,8-dimethyl-5-benzyl-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole;

2-methyl-5-(2-methyl-3-pyridyl)ethyl-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole;

2,8-dimethyl-5-(2-(6-methyl-3-pyridyl)ethyl)-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole;

2-methyl-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole;

2,8-dimethyl-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole;

2-methyl-8-bromo-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole.

26. The method of claim 25, wherein the hydrogenated pyrido (4,3-b) indole is 2,8-dimethyl-5-(2-(6-methyl-3-pyridyl)ethyl)-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole.

27. The method of claim 19 or 26, wherein the pharmaceutically acceptable salt is a pharmaceutically acceptable acid salt.

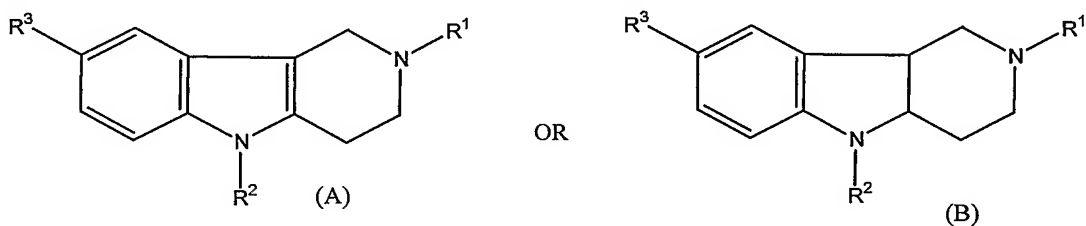
28. The method of claim 19, wherein the pharmaceutically acceptable salt is a hydrochloride acid salt.

29. The method of claim 19, wherein the hydrogenated pyrido (4,3-b) indole is 2,8-dimethyl-5-(2-(6-methyl-3-pyridyl)ethyl)-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole dihydrochloride.

30. The method of claim 24, wherein R<sup>1</sup> is CH<sub>3</sub>-, R<sup>2</sup> is H and R<sup>3</sup> is CH<sub>3</sub>-.

31. The method of claim 24 wherein R<sup>1</sup> CH<sub>3</sub>CH<sub>2</sub>- or PhCH<sub>2</sub>-, R<sup>2</sup> is H-, and R<sup>3</sup> is CH<sub>3</sub>-.

32. The method of claim 24, wherein  $R^1$  is  $CH_3-$ ,  $R^2$  is  $PhCH_2-$ , and  $R^3$  is  $CH_3-$ .
33. The method of claim 24, wherein  $R^1$  is  $CH_3-$ ,  $R^2$  is 6- $CH_3$ -3-Py- $(CH_2)_2-$ , and  $R^3$  is H-.
34. The method of claim 24, where  $R^2$  is 6- $CH_3$ -3-Py- $(CH_2)_2-$ .
35. The method of claim 24, wherein  $R^1$  is  $CH_3-$ ,  $R^2$  is H-, and  $R^3$  is H- or  $CH_3-$ .
36. The method of claim 24, where  $R^1$  is  $CH_3-$ ,  $R^2$  is H-, and  $R^3$  is Br-.
37. A method of slowing the progression of age associated weight loss in a mammal, the method comprising administering to a mammal an amount of a hydrogenated pyrido (4,3-b) indole or pharmaceutically acceptable salt thereof effective to slow the progression of age associated weight loss.
38. The method of claim 37, wherein the hydrogenated pyrido (4,3-b) indole is a tetrahydro pyrido (4,3-b) indole.
39. The method of claim 37, wherein the hydrogenated pyrido (4,3-b) indole is a hexahydro pyrido (4,3-b) indole.
40. The method of claim 37, wherein the hydrogenated pyrido (4,3-b) indole is of the formula:



wherein:

$R^1$  is selected from a lower alkyl or aralkyl

$R^2$  is selected from a hydrogen, aralkyl or substituted heteroaralkyl

$R^3$  is selected from hydrogen, lower alkyl or halo.

41. The method of claim 40, wherein aralkyl is PhCH<sub>2</sub>- and substituted heteroaralkyl is 6-CH<sub>3</sub>-3-Py-(CH<sub>2</sub>)<sub>2</sub>-.

42. The method of claim 40, wherein

R<sup>1</sup> is selected from CH<sub>3</sub>-, CH<sub>3</sub>CH<sub>2</sub>-, or PhCH<sub>2</sub>-

R<sup>2</sup> is selected from H-, PhCH<sub>2</sub>-, or 6-CH<sub>3</sub>-3-Py-(CH<sub>2</sub>)<sub>2</sub>-

R<sup>3</sup> is selected from H-, CH<sub>3</sub>- or Br-.

43. The method of claim 37, wherein the hydrogenated pyrido (4,3-b) indole is selected from the group consisting of:

cis(±) 2,8-dimethyl-2,3,4,4a,5,9b-hexahydro-1H-pyrido[4,3-b]indole;

2-ethyl-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole;

2-benzyl-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole;

2,8-dimethyl-5-benzyl-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole;

2-methyl-5-(2-methyl-3-pyridyl)ethyl-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole;

2,8-dimethyl-5-(2-(6-methyl-3-pyridyl)ethyl)-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole;

2-methyl-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole;

2,8-dimethyl-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole;

2-methyl-8-bromo-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole.

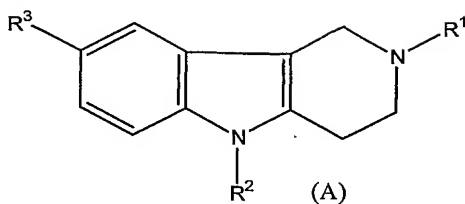
44. The method of claim 43, wherein the hydrogenated pyrido (4,3-b) indole is 2,8-dimethyl-5-(2-(6-methyl-3-pyridyl)ethyl)-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole.

45. The method of claim 37 or 44, wherein the pharmaceutically acceptable salt is a pharmaceutically acceptable acid salt.

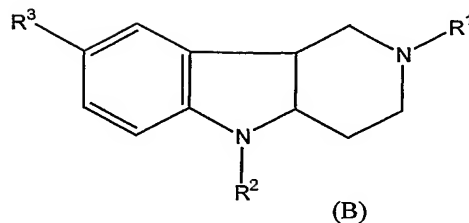
46. The method of claim 45, wherein the pharmaceutically acceptable salt is a hydrochloride acid salt.

47. The method of claim 37, wherein the hydrogenated pyrido (4,3-b) indole is 2,8-dimethyl-5-(2-(6-methyl-3-pyridyl)ethyl)-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole dihydrochloride.

48. The method of claim 42, wherein  $R^1$  is  $CH_3-$ ,  $R^2$  is H and  $R^3$  is  $CH_3-$ .
49. The method of claim 42 wherein  $R^1$   $CH_3CH_2-$  or  $PhCH_2-$ ,  $R^2$  is H-, and  $R^3$  is  $CH_3-$ .
50. The method of claim 42, wherein  $R^1$  is  $CH_3-$ ,  $R^2$  is  $PhCH_2-$ , and  $R^3$  is  $CH_3-$ .
51. The method of claim 42, wherein  $R^1$  is  $CH_3-$ ,  $R^2$  is 6- $CH_3$ -3-Py- $(CH_2)_2-$ , and  $R^3$  is H-.
52. The method of claim 42, where  $R^2$  is 6- $CH_3$ -3-Py- $(CH_2)_2-$ .
53. The method of claim 42, wherein  $R^1$  is  $CH_3-$ ,  $R^2$  is H-, and  $R^3$  is H- or  $CH_3-$ .
54. The method of claim 42, where  $R^1$  is  $CH_3-$ ,  $R^2$  is H-, and  $R^3$  is Br-.
55. A method of slowing the onset of an age associated vision disturbance in a mammal, the method comprising administering to a mammal an amount of a hydrogenated pyrido (4,3-b) indole or pharmaceutically acceptable salt thereof effective to slow the onset of an age associated vision disturbance.
56. The method of claim 55, wherein the age associated vision disturbance is age associated cataracts.
57. The method of claim 56, wherein the hydrogenated pyrido (4,3-b) indole is a tetrahydro pyrido (4,3-b) indole.
58. The method of claim 56, wherein the hydrogenated pyrido (4,3-b) indole is a hexahydro pyrido (4,3-b) indole.
59. The method of claim 56, wherein the hydrogenated pyrido (4,3-b) indole is of the formula:



OR



wherein:

$R^1$  is selected from a lower alkyl or aralkyl

$R^2$  is selected from a hydrogen, aralkyl or substituted heteroaralkyl

$R^3$  is selected from hydrogen, lower alkyl or halo.

60. The method of claim 59, wherein aralkyl is  $\text{PhCH}_2$ - and substituted heteroaralkyl is 6- $\text{CH}_3$ -3-Py- $(\text{CH}_2)_2$ -.

61. The method of claim 59, wherein

$R^1$  is selected from  $\text{CH}_3$ -,  $\text{CH}_3\text{CH}_2$ -, or  $\text{PhCH}_2$ -

$R^2$  is selected from H-,  $\text{PhCH}_2$ -, or 6- $\text{CH}_3$ -3-Py- $(\text{CH}_2)_2$ -

$R^3$  is selected from H-,  $\text{CH}_3$ - or Br-.

62. The method of claim 56, wherein the hydrogenated pyrido (4,3-b) indole is selected from the group consisting of:

cis( $\pm$ ) 2,8-dimethyl-2,3,4,4a,5,9b-hexahydro-1H-pyrido[4,3-b]indole;

2-ethyl-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole;

2-benzyl-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole;

2,8-dimethyl-5-benzyl-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole;

2-methyl-5-(2-methyl-3-pyridyl)ethyl-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole;

2,8-dimethyl-5-(2-(6-methyl-3-pyridyl)ethyl)-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole;

2-methyl-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole;

2,8-dimethyl-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole;

2-methyl-8-bromo-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole.

63. The method of claim 62, wherein the hydrogenated pyrido (4,3-b) indole is 2,8-dimethyl-5-(2-(6-methyl-3-pyridyl)ethyl)-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole.



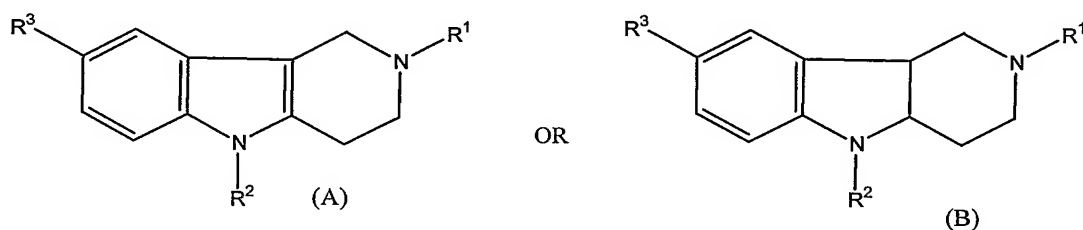
64. The method of claim 56 or 63, wherein the pharmaceutically acceptable salt is a pharmaceutically acceptable acid salt.
65. The method of claim 64, wherein the pharmaceutically acceptable salt is a hydrochloride acid salt.
66. The method of claim 56, wherein the hydrogenated pyrido (4,3-b) indole is 2,8-dimethyl-5-(2-(6-methyl-3-pyridyl)ethyl)-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole dihydrochloride.
67. The method of claim 61, wherein  $R^1$  is  $CH_3-$ ,  $R^2$  is H and  $R^3$  is  $CH_3-$ .
68. The method of claim 61, wherein  $R^1$  is  $CH_3CH_2-$  or  $PhCH_2-$ ,  $R^2$  is H-, and  $R^3$  is  $CH_3-$ .
69. The method of claim 61, wherein  $R^1$  is  $CH_3-$ ,  $R^2$  is  $PhCH_2-$ , and  $R^3$  is  $CH_3-$ .
70. The method of claim 61, wherein  $R^1$  is  $CH_3-$ ,  $R^2$  is 6- $CH_3$ -3-Py- $(CH_2)_2-$ , and  $R^3$  is H-.
71. The method of claim 61, where  $R^2$  is 6- $CH_3$ -3-Py- $(CH_2)_2-$ .
72. The method of claim 61, wherein  $R^1$  is  $CH_3-$ ,  $R^2$  is H-, and  $R^3$  is H- or  $CH_3-$ .
73. The method of claim 61, where  $R^1$  is  $CH_3-$ ,  $R^2$  is H-, and  $R^3$  is Br-.
74. The method of claim 1, 8, 11, 19, 26, 29, 37, 44, 47, 55, 56, 63 or 66 wherein the mammal is a human.
75. The method of claim 74, wherein the human is elderly.
76. The method of claim 1, 8, 11, 19, 26, 29, 37, 44, 47, 55, 56, 63 or 66 wherein the method comprises administering a daily dose of the hydrogenated pyrido (4,3-b) indole to the mammal.

77. A method of improving the quality of life of a mammal, the method comprising administering to a mammal an amount of a hydrogenated pyrido (4,3-b) indole or pharmaceutically acceptable salt thereof effective to improve the quality of life of the mammal.

78. The method of claim 77, wherein the hydrogenated pyrido (4,3-b) indole is a tetrahydro pyrido (4,3-b) indole.

79. The method of claim 77, wherein the hydrogenated pyrido (4,3-b) indole is a hexahydro pyrido (4,3-b) indole.

80. The method of claim 77, wherein the hydrogenated pyrido (4,3-b) indole is of the formula:



wherein:

$R^1$  is selected from a lower alkyl or aralkyl

$R^2$  is selected from a hydrogen, aralkyl or substituted heteroaralkyl

$R^3$  is selected from hydrogen, lower alkyl or halo.

81. The method of claim 80, wherein aralkyl is  $\text{PhCH}_2$ - and substituted heteroaralkyl is 6- $\text{CH}_3$ -3-Py- $(\text{CH}_2)_2$ -.

82. The method of claim 80, wherein

$R^1$  is selected from  $\text{CH}_3$ -,  $\text{CH}_3\text{CH}_2$ -, or  $\text{PhCH}_2$ -

$R^2$  is selected from H-,  $\text{PhCH}_2$ -, or 6- $\text{CH}_3$ -3-Py- $(\text{CH}_2)_2$ -

$R^3$  is selected from H-,  $\text{CH}_3$ - or Br-.

83. The method of claim 77, wherein the hydrogenated pyrido (4,3-b) indole is selected from the group consisting of:

- cis(±) 2,8-dimethyl-2,3,4,4a,5,9b-hexahydro-1H-pyrido[4,3-b]indole;
- 2-ethyl-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole;
- 2-benzyl-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole;
- 2,8-dimethyl-5-benzyl-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole;
- 2-methyl-5-(2-methyl-3-pyridyl)ethyl-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole;
- 2,8-dimethyl-5-(2-(6-methyl-3-pyridyl)ethyl)-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole;
- 2-methyl-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole;
- 2,8-dimethyl-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole;
- 2-methyl-8-bromo-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole.

84. The method of claim 83, wherein the hydrogenated pyrido (4,3-b) indole is 2,8-dimethyl-5-(2-(6-methyl-3-pyridyl)ethyl)-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole.

85. The method of claim 79 or 84, wherein the pharmaceutically acceptable salt is a pharmaceutically acceptable acid salt.

86. The method of claim 85, wherein the pharmaceutically acceptable salt is a hydrochloride acid salt.

87. The method of claim 77, wherein the hydrogenated pyrido (4,3-b) indole is 2,8-dimethyl-5-(2-(6-methyl-3-pyridyl)ethyl)-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole dihydrochloride.

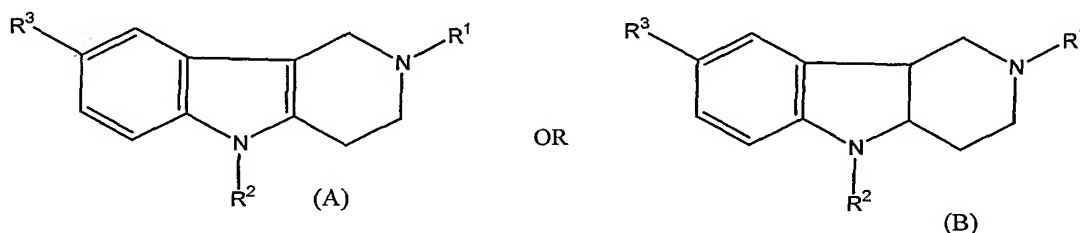
88. The method of claim 82, wherein  $R^1$  is  $CH_3-$ ,  $R^2$  is H and  $R^3$  is  $CH_3-$ .

89. The method of claim 82 wherein  $R^1$   $CH_3CH_2-$  or  $PhCH_2-$ ,  $R^2$  is H-, and  $R^3$  is  $CH_3-$ .

90. The method of claim 82, wherein  $R^1$  is  $CH_3-$ ,  $R^2$  is  $PhCH_2-$ , and  $R^3$  is  $CH_3-$ .

91. The method of claim 82, wherein  $R^1$  is  $CH_3-$ ,  $R^2$  is 6- $CH_3$ -3-Py- $(CH_2)_2-$ , and  $R^3$  is H-.

92. The method of claim 82, where  $R^2$  is 6-CH<sub>3</sub>-3-Py-(CH<sub>2</sub>)<sub>2</sub>-.
93. The method of claim 82, wherein  $R^1$  is CH<sub>3</sub>-,  $R^2$  is H-, and  $R^3$  is H- or CH<sub>3</sub>-.
94. The method of claim 82, where  $R^1$  is CH<sub>3</sub>-,  $R^2$  is H-, and  $R^3$  is Br-.
95. A method of prolonging the lifespan of a mammal, the method comprising administering to a mammal an amount of a hydrogenated pyrido (4,3-b) indole or pharmaceutically acceptable salt thereof effective to prolong the lifespan of the mammal.
96. The method of claim 95, wherein the hydrogenated pyrido (4,3-b) indole is a tetrahydro pyrido (4,3-b) indole.
97. The method of claim 95, wherein the hydrogenated pyrido (4,3-b) indole is a hexahydro pyrido (4,3-b) indole.
98. The method of claim 95, wherein the hydrogenated pyrido (4,3-b) indole is of the formula:



wherein:

$R^1$  is selected from a lower alkyl or aralkyl

$R^2$  is selected from a hydrogen, aralkyl or substituted heteroaralkyl

$R^3$  is selected from hydrogen, lower alkyl or halo.

99. The method of claim 98, wherein aralkyl is PhCH<sub>2</sub>- and substituted heteroaralkyl is 6-CH<sub>3</sub>-3-Py-(CH<sub>2</sub>)<sub>2</sub>-.
100. The method of claim 98, wherein

R<sup>1</sup> is selected from CH<sub>3</sub>-, CH<sub>3</sub>CH<sub>2</sub>-, or PhCH<sub>2</sub>-

R<sup>2</sup> is selected from H-, PhCH<sub>2</sub>-, or 6-CH<sub>3</sub>-3-Py-(CH<sub>2</sub>)<sub>2</sub>-

R<sup>3</sup> is selected from H-, CH<sub>3</sub>- or Br-.

101. The method of claim 98, wherein the hydrogenated pyrido (4,3-b) indole is selected from the group consisting of:

cis(±) 2,8-dimethyl-2,3,4,4a,5,9b-hexahydro-1H-pyrido[4,3-b]indole;

2-ethyl-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole;

2-benzyl-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole;

2,8-dimethyl-5-benzyl-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole;

2-methyl-5-(2-methyl-3-pyridyl)ethyl-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole;

2,8-dimethyl-5-(2-(6-methyl-3-pyridyl)ethyl)-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole;

2-methyl-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole;

2,8-dimethyl-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole;

2-methyl-8-bromo-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole.

102. The method of claim 101, wherein the hydrogenated pyrido (4,3-b) indole is 2,8-dimethyl-5-(2-(6-methyl-3-pyridyl)ethyl)-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole.

103. The method of claim 95 or 102, wherein the pharmaceutically acceptable salt is a pharmaceutically acceptable acid salt.

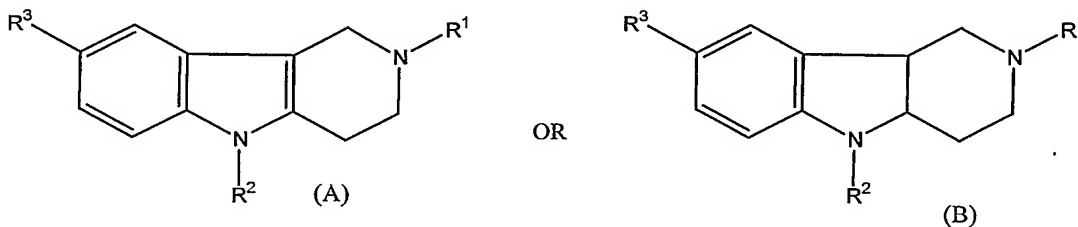
104. The method of claim 103, wherein the pharmaceutically acceptable salt is a hydrochloride acid salt.

105. The method of claim 95, wherein the hydrogenated pyrido (4,3-b) indole is 2,8-dimethyl-5-(2-(6-methyl-3-pyridyl)ethyl)-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole dihydrochloride.

106. The method of claim 100, wherein R<sup>1</sup> is CH<sub>3</sub>-, R<sup>2</sup> is H and R<sup>3</sup> is CH<sub>3</sub>-.

107. The method of claim 100 wherein R<sup>1</sup> is CH<sub>3</sub>CH<sub>2</sub>- or PhCH<sub>2</sub>-, R<sup>2</sup> is H-, and R<sup>3</sup> is CH<sub>3</sub>-.

108. The method of claim 100, wherein  $R^1$  is  $CH_3-$ ,  $R^2$  is  $PhCH_2-$ , and  $R^3$  is  $CH_3-$ .
109. The method of claim 100, wherein  $R^1$  is  $CH_3-$ ,  $R^2$  is 6- $CH_3$ -3-Py- $(CH_2)_2-$ , and  $R^3$  is H-.
110. The method of claim 100, where  $R^2$  is 6- $CH_3$ -3-Py- $(CH_2)_2-$ .
111. The method of claim 100, wherein  $R^1$  is  $CH_3-$ ,  $R^2$  is H-, and  $R^3$  is H- or  $CH_3-$ .
112. The method of claim 100, where  $R^1$  is  $CH_3-$ ,  $R^2$  is H-, and  $R^3$  is Br-.
113. A method of extending the lifespan of a cell in a mammal, the method comprising administering to a mammal an amount of a hydrogenated pyrido (4,3-b) indole or pharmaceutically acceptable salt thereof effective to extending the lifespan of a cell in the mammal.
114. The method of claim 113, wherein the hydrogenated pyrido (4,3-b) indole is a tetrahydro pyrido (4,3-b) indole.
115. The method of claim 113, wherein the hydrogenated pyrido (4,3-b) indole is a hexahydro pyrido (4,3-b) indole.
116. The method of claim 113, wherein the hydrogenated pyrido (4,3-b) indole is of the formula:



wherein:

$R^1$  is selected from a lower alkyl or aralkyl

$R^2$  is selected from a hydrogen, aralkyl or substituted heteroaralkyl

$R^3$  is selected from hydrogen, lower alkyl or halo.

117. The method of claim 116, wherein aralkyl is PhCH<sub>2</sub>- and substituted heteroaralkyl is 6-CH<sub>3</sub>-3-Py-(CH<sub>2</sub>)<sub>2</sub>-.

118. The method of claim 116, wherein

R<sup>1</sup> is selected from CH<sub>3</sub>-, CH<sub>3</sub>CH<sub>2</sub>-, or PhCH<sub>2</sub>-

R<sup>2</sup> is selected from H-, PhCH<sub>2</sub>-, or 6-CH<sub>3</sub>-3-Py-(CH<sub>2</sub>)<sub>2</sub>-

R<sup>3</sup> is selected from H-, CH<sub>3</sub>- or Br-.

119. The method of claim 113, wherein the hydrogenated pyrido (4,3-b) indole is selected from the group consisting of:

cis(±) 2,8-dimethyl-2,3,4,4a,5,9b-hexahydro-1H-pyrido[4,3-b]indole;

2-ethyl-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole;

2-benzyl-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole;

2,8-dimethyl-5-benzyl-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole;

2-methyl-5-(2-methyl-3-pyridyl)ethyl-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole;

2,8-dimethyl-5-(2-(6-methyl-3-pyridyl)ethyl)-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole;

2-methyl-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole;

2,8-dimethyl-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole;

2-methyl-8-bromo-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole.

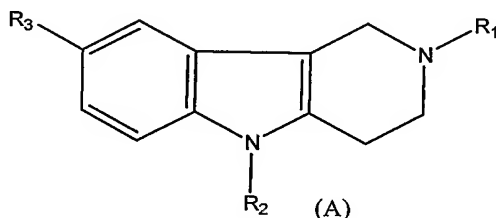
120. The method of claim 119, wherein the hydrogenated pyrido (4,3-b) indole is 2,8-dimethyl-5-(2-(6-methyl-3-pyridyl)ethyl)-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole.

121. The method of claim 79 or 84, wherein the pharmaceutically acceptable salt is a pharmaceutically acceptable acid salt.

122. The method of claim 121, wherein the pharmaceutically acceptable salt is a hydrochloride acid salt.

123. The method of claim 113, wherein the hydrogenated pyrido (4,3-b) indole is 2,8-dimethyl-5-(2-(6-methyl-3-pyridyl)ethyl)-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole dihydrochloride.

124. The method of claim 118, wherein  $R^1$  is  $CH_3-$ ,  $R^2$  is H and  $R^3$  is  $CH_3-$ .
125. The method of claim 118 wherein  $R^1$   $CH_3CH_2-$  or  $PhCH_2-$ ,  $R^2$  is H-, and  $R^3$  is  $CH_3-$ .
126. The method of claim 118, wherein  $R^1$  is  $CH_3-$ ,  $R^2$  is  $PhCH_2-$ , and  $R^3$  is  $CH_3-$ .
127. The method of claim 118, wherein  $R^1$  is  $CH_3-$ ,  $R^2$  is 6- $CH_3$ -3-Py- $(CH_2)_2-$ , and  $R^3$  is H-.
128. The method of claim 118, where  $R^2$  is 6- $CH_3$ -3-Py- $(CH_2)_2-$ .
129. The method of claim 118, wherein  $R^1$  is  $CH_3-$ ,  $R^2$  is H-, and  $R^3$  is H- or  $CH_3-$ .
130. The method of claim 118, where  $R^1$  is  $CH_3-$ ,  $R^2$  is H-, and  $R^3$  is Br-.
131. The method of claim 2, 22, 40, 59, 80, 98 or 116 wherein the hydrogenated pyrido (4,3-b) indole is of the formula:



132. The method of claim 2, 22, 40, 59, 80, 98 or 116 wherein the hydrogenated pyrido (4,3-b) indole is of the formula:

